

REMARKS

This case has been carefully reviewed and analyzed, and reconsideration and favorable action is respectfully requested.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (MPEP 606.01). The title should mention the gear arrangement.

Responsive to this, the title of the invention is amended according to the Examiner's instruction and suggestion.

Claim 1-6 are rejected under 35 U.S.C. 112, first paragraph, for the reasons set forth in the objection to the specification.

Responsive to this, the specification and claims 1-6 are amended according to the Examiner's instruction and suggestion. Therefore, it is believed that, by the amendments, the rejection under 35 U.S.C. 112, first paragraph should be removed. In addition, the specification is also amended to conform to the amended claims.

Claims 1, 3, 4, 5, and 6 were rejected under 35 U.S.C. 102 (b) as being anticipated by Garms (USP 1,198,209). In addition, claims 1, 3, 4, 5, and 6 were rejected under 35 U.S.C. 102 (b) as being anticipated by Mylo (USP 3,266,430).

Responsive to this, claims 1-6 are amended. Therefore, it is believed that, by the amendments, the rejection under U.S.C.

102(b) should be removed. In addition, the specification is also amended to conform to the amended claims.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garms (USP 1,198,209) or Mylo (USP 3,266,430) in view of Buchheit (USP 3,749,374).

Responsive to this, the title of the invention has been amended, claim 2 is deleted, and claim 1 is amended which substantially the combination of original claims 1 and 2 so as to make the claimed invention more distinguishably patentable over the prior arts cited by the Examiner.

Therefore, it is believed that, by the amendments, the rejection under 35 U.S.C. 103 (a), first paragraph should be removed, and the amended claim 1 should be allowable. In addition, the specification is also amended to conform to the amended claims.

It is further submitted that claims 3-6 should be allowable as they dependent upon the amended claim 1 which is believed to be allowable.

In view of the foregoing amendments and remarks, Applicant submits that the application is now in a condition for allowance and such action is respectfully requested.

Request for Constructive Assistance

The applicant has made a diligent effort in amending the original claim in order to put the present claim into condition for allowance. Should the Examiner find more areas in need of correction, the applicant requests for constructive suggestions from the Examiner as pursuant to MPEP 706.03(d), and more particularly, if further objections be found with the claim, for the Examiner to draft one or more allowable claims as pursuant to MPEP 707.07(j).

Respectfully submitted,

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MARKED-UP VERSION SHOWING CHANGES MADE

IN THE TITLE OF THE INVENTION

The title of the invention has been amended as follows:

--Gear extrusion molding machine--

IN THE SPECIFICATION

The entire paragraph beginning at page 1, line 3 has been amended as follows:

--The present invention relates to ~~an~~ a gear extrusion molding machine. More particularly, the present invention relates to ~~an~~ a gear extrusion molding machine which has a main extrusion molding device having a plurality of gears.--

The entire paragraph beginning at page 2, line 2 has been amended as follows:

--An object of the present invention is to provide ~~an~~ a gear extrusion molding machine which has a main extrusion molding device having a plurality of gears in order to mix and blend a raw material evenly.

Another object of the present invention is to provide ~~an~~ a gear extrusion molding machine which has a main extrusion molding device having a plurality of gears arranged longitudinally according to the principle of gravity.

Accordingly, ~~an~~ a gear extrusion molding machine comprises a main extrusion molding device, and a drive mechanism connected to the main extrusion molding device. The main

extrusion molding device has an upper feed inlet, a lower chamber, and a gear mechanism therein. The gear mechanism has a main gear and a plurality of pinions. A feed mechanism has the main gear, a first portion of the gear mechanism, and a containing interior. The feed mechanism is adjacent to the upper feed inlet of the main extrusion molding device. A compression mechanism is disposed below the feed mechanism. The compression mechanism has the main gear, a second portion of the gear mechanism, and a guide interior. A blending mechanism is disposed below the compression mechanism. The blending mechanism has a third portion of the gear mechanism, and a blending spacing. A metering mechanism is disposed below the blending mechanism. The metering mechanism has a fourth portion of the gear mechanism. The lower chamber of the main extrusion molding device communicates with the metering mechanism.--

The entire paragraph beginning at page 3, line 7 has been amended as follows:

-- FIG. 1 is an elevational view of ~~an~~ a gear extrusion molding machine of a first preferred embodiment in accordance with the present invention.

FIG. 2 is a sectional view of a main extrusion molding device of a first preferred embodiment taken along line ~~2A-2A~~ 2-2 in FIG. 1;--

The entire paragraph beginning at page 4, line 9 has been

amended as follows:

--Referring to FIGS. ~~1 to 6~~ first 1 and 2, ~~an a gear~~ extrusion molding machine 1 comprises a main extrusion molding device 2, and a drive mechanism 3 connected to the main extrusion molding device 2.--

The entire paragraph beginning at page 4, line 13 has been amended as follows:

--The drive shaft 33 passes through the transmission case 32 to be inserted in a main gear 41 of a gear mechanism 4 of the main extrusion molding device 2.

The entire paragraph beginning at page 5, line 13 has been amended as follows:

--~~A~~ Referring to FIGS. 2 and 3, a feed mechanism 23 has the first pinion 42, the second pinion 43, the third pinion 44, the main gear 41, and a containing interior 231 defined by the first pinion 42, the second pinion 43, the third pinion 44, and the main gear 41. The containing interior 231 provides a cushioning effect when a raw material is poured into the feed hopper 22.--

The entire paragraph beginning at page 5, line 20 has been amended as follows:

--~~A~~ Referring to FIGS. 2 and 4, a compression mechanism 24 has the third pinion 44, the main gear 41, the fourth pinion 45, and a guide interior 241 formed between the main gear 41

and a guide surface 242 of the main extrusion molding device 2.

The fourth pinion 45 contacts a compression surface 243 of the main extrusion molding device 2 tightly to compress the raw material.--

The entire paragraph beginning at page 6, line 4 has been amended as follows:

--~~A~~ Referring to FIGS. 2 and 5, a blending mechanism 25 has the fifth pinion 46 and a blending spacing 251 formed between the fifth pinion 46 and a blending surface 252 of the main extrusion molding device 2 and to mix the raw material even completely.

~~A~~ Referring to FIGS. 2 and 6, a metering mechanism, which is located below the blending mechanism 25, has the sixth pinion 47 and the seventh pinion 48. The metering mechanism divides the even mixed raw material equally.--

The entire paragraph beginning at page 6, line 12 has been amended as follows:

--~~A~~ In operation, a raw material such as a plastics material and a rubber material is poured into the feed hopper 57 22. The main gear 41 of the gear mechanism 4 drives all of the gears and moves the raw material from upward to downward.

The raw material enters the upper feed inlet 21 of the main extrusion molding device 2. Then the raw material enters the

containing interior 231 of the feed mechanism 23 to be cushioned, the guide interior 241 of the compression mechanism 24 + . Then the raw material enters between the fourth pinion 45 and the compression surface 243 by the inclined interval comprises by the main gear 41 and the guide surface 242 to be compressed. The compressed material enters the blending spacing 251 of the blending mechanism 25 + to be mixed even completely and the metering mechanism 26 + to be divided equally. Then the material enters the lower chamber 28 of the main extrusion molding device 2, and when the amount of the material is enough then the material leaves the gear extrusion machine from the outlet 271 of the discharge pipe 27.--

The entire paragraph beginning at page 6, line 21 has been amended as follows:

--Referring to FIGS. 7 and 8, another gear extrusion molding machine 1 comprises a main extrusion molding device 2. The main extrusion molding device 2 has a feed mechanism 23, a compression mechanism 24, two blending mechanisms 25, a metering mechanism and an additional feeding mechanism 29 inserted in the blending mechanism two blending mechanisms 25.

The feeding mechanism 29 pushes the fixed raw material from one blending mechanism 25 into another blending mechanism 25 to make the raw material to be fixed more completely and get better and evener sticky raw material.

In FIG. 7, ~~The~~ the blending mechanism 25 and the metering mechanism 26 arranged transversely to buffer the proceeding speed of the raw material that comes vertically.

In FIG. 8, the blending mechanism 25 and the metering mechanism 26 arranged wavily to buffer the proceeding speed of the raw material that comes vertically.--

IN THE CLAIM

Claim 2 has been cancelled without prejudice.

Claim 1 has been amended as follows:

Claim 1 (Amended): ~~An~~ A gear extrusion molding machine ~~comprises comprising:~~

a main extrusion molding device, and a drive mechanism connected to the main extrusion molding device,

the main extrusion molding device having an upper feed inlet, a lower chamber, and a gear mechanism therein,

the gear mechanism having a main gear and a plurality of pinions,

a feed mechanism having the main gear, a first portion of the gear mechanism, and a containing interior,

the feed mechanism adjacent to the upper feed inlet of the main extrusion molding device,

a compression mechanism disposed below the feed mechanism,

the compression mechanism having the main gear, a second portion of the gear mechanism, and a guide interior,

a blending mechanism disposed below the compression mechanism,

the blending mechanism having a third portion of the gear mechanism, and a blending spacing,

a metering mechanism disposed below the blending mechanism,

the metering mechanism having a fourth portion of the gear mechanism, and

the lower chamber of the main extrusion molding device communicating with the metering mechanism ; wherein:

the gear extrusion molding machine as claimed in claim 1, wherein the drive mechanism has a motor device, a transmission case, and a drive shaft connected to the motor device, and the drive shaft passes through the transmission case to be inserted in the main extrusion molding device.

Claim 3 has been amended as follows:

Claim 3 (Amended): The gear extrusion molding machine as claimed in claim 1, wherein a feed hopper is disposed on the main extrusion molding device to communicate with the upper feed inlet of the main extrusion molding device.

Claim 4 has been amended as follows:

Claim 4 (Amended): The gear extrusion molding machine as
claimed in claim 1, wherein a discharge pipe is disposed on the main extrusion molding device to communicate with the lower

chamber of the main extrusion molding device, and the discharge pipe has an outlet.

Claim 5 has been amended as follows:

Claim 5 (Amended) : The gear extrusion molding machine as claimed in claim 1, wherein the blending mechanism and the metering mechanism are arranged transversely.

Claim 6 has been amended as follows:

Claim 6 (Amended) : The gear extrusion molding machine as claimed in claim 1, wherein a feeding mechanism is inserted in the blending mechanism.